

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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TITLE: METHOD AND APPARATUS FOR DETECTING MASTITIS

Amendment A: CLAIM AMENDMENTS

Claims 1 - 20 (canceled).

21. (new) A method of testing milk from an animal for a presence of an infection in the animal, the method comprising:

introducing an unfiltered liquid sample of the milk and a reagent into a reaction chamber, said reagent having a light-amplifying compound therein;

reacting said light-amplifying compound with a substance produced by cells of the animal in response to the infection;

emitting light from the reacted light-amplifying compound; and

immediately measuring an intensity of the emitted light.

22. (new) The method of Claim 21, said substance being produced by phagocytic leukocytes.

23. (new) The method of Claim 22, said substance being produced when phagocytic leukocytes phagocytose bacteria.

24. (new) The method of Claim 23, said light-amplifying compound reacting with reactive oxygen so as to emit light.

25. (new) The method of Claim 21, the step of immediately measuring comprising:

measuring said intensity for a maximum of five minutes after the step of introducing.

26. (new) The method of Claim 21, further comprising:

forming a fluid-tight and light-tight reaction chamber of variable capacity;

connecting a first inlet port of said reacting chamber to a milk line of an automatic milking system;

connecting a second inlet port of said reaction chamber to a supply of said reagent;

and

increasing a capacity of said reaction chamber so as to draw the milk and said reagent into said reaction chamber.

27. (new) The method of Claim 26, further comprising:

connecting electrically-actuated operating valves to said first and second inlet ports;

and

controlling said operating valves to regulate a proportion of said reagent and the milk drawn into said reaction chamber.

28. (new) The method of Claim 26, the step of increasing the capacity comprising:

moving a piston in said reaction chamber.